

**Morris, James**

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**From:** Patterson, Leslie  
**Sent:** Monday, November 10, 2014 7:51 AM  
**To:** Podowski, Andrew  
**Cc:** Fischer, Timothy  
**Subject:** RE: Pristine Inc. Site HHRA ~RPT-003250~

Thanks, Andrew.

Leslie Patterson  
Remedial Project Manager  
U. S. Environmental Protection Agency, Region 5  
Superfund Remedial Response, SR-6J  
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patterson.leslie@epa.gov

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**From:** Podowski, Andrew  
**Sent:** Friday, November 07, 2014 1:34 PM  
**To:** Patterson, Leslie  
**Cc:** Fischer, Timothy  
**Subject:** RE: Pristine Inc. Site HHRA ~RPT-003250~

Leslie, thanks for your thoughts and this information. I think we are talking about a hypothetical future industrial subchronic or chronic scenario. Acute scenarios are generally assessed by the Emergency Response Removal Program in Superfund. And you are correct that in acute exposures the use of the highest concentrations would be the way to go. In Baseline Risk Assessments for hypothetical future scenarios we assume there won't be any Institutional Controls in place. And, therefore, we would proceed in evaluating the appropriate future receptors and scenarios, using our default equations and input parameters to estimate plausible exposures and risk. Therefore, unless there are or will be Institutional Controls in place for the future, to modify our defaults, we have to assume that our defaults apply. Since you are more familiar with this site than I am, you know whether ICs will be carried forth into the future or not. If so, then the hypothetical future groundwater exposures as described by the respondents may be appropriate. That is, the use of average concentrations for constituents, as concentration terms, may be appropriate in both Central Tendency and RME estimates, if the concentration terms are based on about 30 years of collected data. This also assumes that the groundwater plumes will not be impacted by any new spiked releases of constituents from known or unknown sources in the future. If that were to happen, then all bets are off.

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**From:** Patterson, Leslie  
**Sent:** Monday, November 03, 2014 3:20 PM  
**To:** Podowski, Andrew  
**Cc:** Fischer, Timothy  
**Subject:** RE: Pristine Inc. Site HHRA ~RPT-003250~

Hi Andrew,

Thanks for the follow up on those responses from the Pristine PRP. I think my understanding of the PRP's response #8 is a bit different from yours—the PRPs are talking about averaging concentrations from different discrete depths in the groundwater aquifer, which makes sense when wells have long screens and collect water from a broad cross section of

the aquifer. I think if there were an unacceptable potential future acute exposure we would be more concerned with exposure to the highest concentrations measured, but knowing the construction and pumping details of the wells, we can be confident that wells would be unlikely to deliver the more contaminated water with no dilution. In addition, we have groundwater data from almost 30 years at the site, so the reason for using the higher concentration that you cite – that a small dataset and high uncertainty in the data support use of RME assumptions – doesn't really apply here. If you think I'm way off on this let me know this week, otherwise if that's the last issue, I think I can approve this. Thanks again.

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**From:** Podowski, Andrew  
**Sent:** Friday, October 24, 2014 12:55 PM  
**To:** Patterson, Leslie  
**Subject:** RE: Pristine Inc. Site HHRA ~RPT-003250~

Leslie, sorry I got sidetracked with another site. I will let you know if I have any additional comments by Monday.

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**From:** Patterson, Leslie  
**Sent:** Friday, October 24, 2014 9:29 AM  
**To:** Podowski, Andrew  
**Cc:** Fischer, Timothy  
**Subject:** RE: Pristine Inc. Site HHRA ~RPT-003250~

Hi Andrew,

I'm checking in with you again to see if you have any follow up issues on the Pristine HHRA. Thanks.

Leslie Patterson  
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**From:** Patterson, Leslie  
**Sent:** Friday, October 10, 2014 2:40 PM  
**To:** Podowski, Andrew  
**Subject:** RE: Pristine Inc. Site HHRA ~RPT-003250~

Hi Andrew,

Do you have any follow-up issues on the correspondence last month on the Pristine Site?

Leslie Patterson  
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**From:** Patterson, Leslie  
**Sent:** Friday, September 19, 2014 4:57 PM  
**To:** Podowski, Andrew  
**Subject:** FW: Pristine Inc. Site HHRA ~RPT-003250~

Hi Andrew,

I think you were cc'd on this email. Could you please review to see you think they have addressed our comments?  
Thanks, and have a great weekend.

Leslie Patterson  
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**From:** Hayward, Julian [<mailto:jhayward@craworld.com>]  
**Sent:** Friday, September 19, 2014 4:26 PM  
**To:** Patterson, Leslie  
**Cc:** Scott Glum; Podowski, Andrew; Cooke, Henry; Martha Farr ([farrs@fuse.net](mailto:farrs@fuse.net)); Dave Ross ([TrusteeRoss@yahoo.com](mailto:TrusteeRoss@yahoo.com)); Ron Pitzer ([trusteerlp@gmail.com](mailto:trusteerlp@gmail.com))  
**Subject:** RE: Pristine Inc. Site HHRA ~RPT-003250~

Hi Leslie, please see attached the following:

- Comment response memo
- Revised report text and table 4.2 (redline)
- Revised appendix A text (redline)
- Revised appendix D text (redline) and new tables 4,5,6

Please review and let us know if the proposed revisions are acceptable, then we will re-issue the complete HHRA report in final form.

Thanks

Julian Hayward

**Conestoga-Rovers & Associates**  
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**From:** Patterson, Leslie [<mailto:patterson.leslie@epa.gov>]  
**Sent:** Friday, August 22, 2014 1:15 PM  
**To:** Hayward, Julian  
**Cc:** Scott Glum; Cooke, Henry; Podowski, Andrew  
**Subject:** RE: Pristine Inc. Site HHRA ~RPT-003250~

Julian,

Please see the attachment for EPA's comments on the HHRA. Thanks.

Leslie Patterson  
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**From:** Hayward, Julian [<mailto:jhayward@craworld.com>]  
**Sent:** Friday, June 27, 2014 9:39 AM  
**To:** Patterson, Leslie  
**Cc:** Scott Glum; Martha Farr ([farrs@fuse.net](mailto:farrs@fuse.net)); Dave Ross ([TrusteeRoss@yahoo.com](mailto:TrusteeRoss@yahoo.com)); Ron Pitzer ([trusteerlp@gmail.com](mailto:trusteerlp@gmail.com)); Ringenbach, Laura A.; Cooke, Henry; [agowing@craworld.com](mailto:agowing@craworld.com); Harris, Rob (Waterloo)  
**Subject:** Pristine Inc. Site HHRA ~RPT-003250~

Leslie,

On behalf of the Pristine Facility Trust, attached is the Human Health Risk Assessment Report for the Pristine Inc., Site. We would be pleased to meet with you and/or discuss by phone to explain the content of the report if that would assist your review. Let me know if you would like us to send any hard copies.

Thanks

**Julian Hayward, P. Eng.**  
**Conestoga-Rovers & Associates (CRA)**

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